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EXAMINER

COURSON, TANIA C

ART UNIT PAPER NUMBER

2859

DATE MAILED: 03/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/612,199

Applicant(s)

LEVINE ET AL.

Examiner

Tania C. Courson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-81 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14-25 and 52-61 is/are allowed.
- 6) ☒ Claim(s) 1-13, 26-28, 32-36, 38-43, 50, 51, 62, 64, 65 and 68-81 is/are rejected.
- 7) ☒ Claim(s) 29-31, 37, 44-49, 63, 66 and 67 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 02MAR05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. The previous final rejection for claims 1-80 of the last Office action (mailed December 7, 2004) is withdrawn, however a final rejection is being reissued in this paper.

#### ***Specification***

2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

- a) Claims 68 and 75 recite the limitation "a normally biased open switch" in lines 5 and 6, respectively, although the specification recites on page 14, line 13, "a normally-open switch" not "a normally biased open switch";
- b) Claim 81 recites the limitation "a normally open momentary switch" in line 2, although the specification recites on page 14, line 13, "a normally-open switch" not "a normally open momentary switch";

#### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Independent claim 1, recites on lines 1-3, "a stud finder" (Fig. 10, stud finder 100) comprising "a surface" (Fig. 10, surface 104) it is confusing as to how the "surface" (104) is

“rotatably mounted relative to said connection structure” when the “connection structure”(106) is on the stud finder itself. Claim 12 fails to further limit the components of the stud finder device.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 5-8, 11-13, 26-28, 32-33, 43, 62 and 64-65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brazell et al (US 2003/0218469 A1, 1<sup>st</sup> interpretation, Figs. 12a, 12b and 12c) in view of Brazell et al (US 2003/0218469 A1, 1<sup>st</sup> interpretation, Fig. 12d).

Brazell et al. (1st interpretation) disclose in Figures 12a-12d), an object sensor and associated method comprising:

With respect to claims 1, 5, 11 and 13:

- a) a surface (Fig. 12a, case 300) and a means on the surface to removably mount a tool which is either the light generating device or the leveling device thereto (Fig. 12a & 12b), wherein the device which is a stud finder (Fig. 12a, object sensor 10) is operable when either the light generating device or the leveling device is mounted thereto (Fig. 12c);

- b) a switch on the surface for activating the stud finder (paragraph 68);
- c) further comprising a capacitive sensor for detecting objects behind walls (Fig. 17, capacitor plates 321, 322);
- d) a housing (Fig. 12a, case 300) adapted for receiving and retaining the light generating device or the leveling device (Fig. 12a) and for retaining components of the stud finder and a controller (Fig. 17, controller 11), and a switch (Fig. 17, switch 9) and at least one light source connected to the controller (paragraph 54)

With respect to claims 26 and 32-33:

- a) a stud finder (Fig. 12a, object sensor 10) and a leveling device (Fig. 12a, level 20) removably attached to said stud finder via a means (Fig. 12a & 12b), wherein the stud finder is operable with the leveling device attached thereto (Fig. 12c);
- b) further comprising a normally-open switch protruding through the surface (paragraph 68)
- c) further comprising at least one LED (paragraph 54).

With respect to claim 43:

- a) inserting a leveling device (Fig. 12a, level 20) onto a structural detector (Fig. 12a, object sensor 10), the structural detector comprising a means adapted to removably mount the leveling device thereto (Fig. 12a & 12b), and an exterior

surface (Fig. 12a), placing the exterior surface against a wall (Fig. 12c), locating at least one concealed feature behind the wall using the structural detector while the leveling device is mounted thereto (Fig. 12c).

With respect to claims 62:

- a) a container defining a volume of space (Fig. 12a, case 300), a stud finder positioned within the volume of space (Fig. 12a, object sensor 10), a leveling device positioned within the volume of space so as to be unattached to the stud finder (Fig. 12a, level 20), and wherein the stud finder is operable with the leveling device mounted thereto (Fig. 12c);

Brazell et al. (Figs. 12a, 12b & 12c) do not disclose wherein a means to removably mount a device/tool is a connection structure on a surface of a device, wherein the surface comprises a flat surface and a recess for holding a tool, wherein the connection structure comprises a latch for releasably holding a tool, wherein the connection structure is selected from the group consisting of a magnet, a magnetically attractive material, a hook fastener, a loop fastener, a tab, a slot, a flat surface, and a latch, wherein the tool comprises a latch that engages the connection structure.

Brazell et al. (Fig. 12d) discloses wherein a means to removably mount a device/tool is a connection structure on a surface of a device (Fig. 12d, recess 111), wherein the surface comprises a flat surface (Fig. 12d) and a recess (Fig. 12d, recess 111) for holding a tool

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(Fig. 12d); wherein the connection structure comprises a latch (Fig. 12d, recess 111) for releasably holding a tool (Fig. 12d); wherein the connection structure is selected from the group consisting of a magnet, a magnetically attractive material, a hook fastener, a loop fastener, a tab, a slot, a flat surface, and a latch (Fig. 12d); wherein the tool comprises a latch that engages the connection structure (Fig. 12d, projections 210). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to further modify the object sensor and associated method disclosed by Brazell et al. (Figs. 12a, 12b & 12c) so as to include a device having a means comprising a connection structure and a device/tool comprising a latch, as taught by Brazell et al. (Fig. 12d), so as to provide a secure means of connection with the device and the device/tool.

Regarding the term “latch”, the examiner utilizes the following broadest definition: “any of various devices in which mating mechanical parts engage to fasten but usually not to lock something” (Merriam-Webster Online Dictionary, 2004).

With respect to claim 12: the prior art of record has not been applied to claim 12 due to the indefinite description as stated above in paragraph 4.

With respect to claim 32: a switch in which the contacts do not touch and require activation via a depression of a component is considered to be a “normally-open switch”.

7. Claims 2-4, 9-10, 34 and 50-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brazell et al. (1<sup>st</sup> interpretation) in view of Brazell et al. (2<sup>nd</sup> interpretation), and Chen (EPO 416162 A1).

Brazell et al. (1<sup>st</sup> interpretation) discloses an object sensor and associated method, as stated above in paragraph 6.

Brazell et al. (1<sup>st</sup> interpretation) further disclose an enclosure for a power source (Fig. 12b), a capacitive sensor for detecting objects (Fig. 17, capacitor plates 321-322), and at least one light for indicating a status of the stud finder (paragraph 54), and connecting a battery to at least one of the structural detector or the light generating device (paragraph 58).

Brazell et al. (1<sup>st</sup> interpretation) do not disclose a marking feature/device selected from the group consisting of a sharp point, a pencil, a pen, a felt tipped pen, a marking pin and a spring-biased marking pin, wherein the surface has at least one orifice for receiving at least one of a marking pin and a touch switch, comprising the step of marking the wall using a marking device attached to the structural detector, at least one spring-loaded marking pin and an actuator for the pin.

Brazell et al. (2<sup>nd</sup> interpretation) teach an object sensor and associated method that consists of a marking feature/device (Fig. 5a, aperture 35 and instrument 37) selected from the group consisting of a sharp point, a pencil, a pen, a felt tipped pen, a marking pin and a spring-biased marking pin (Fig. 5a, aperture 35 and instrument 37), wherein a surface has at least one orifice for receiving at least one of a marking pin and a touch switch (Fig. 5a, aperture 35 and instrument 37) and comprising the step of marking the wall using a marking device attached to



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the structural detector (Fig. 5a, aperture 35 and instrument 37). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the object sensor of Brazell et al. (1<sup>st</sup> interpretation), so as to include a marking feature, as taught by Brazell et al. (2<sup>nd</sup> interpretation), so as to provide an enhanced visual when locating an object during use of the object sensor.

Chen teaches a stud finding device that consists of at least one spring-loaded marking pin and an actuator for the pin (Fig. 4, marking element 6 and spring elements 4). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the object sensor of Brazell et al. (1<sup>st</sup> interpretation), so as to include a spring-loaded marking pin, as taught by Chen, so as to facilitate the means of marking during use of the object sensor.

8. Claims 35-36, 39 and 41-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brazell et al. (1<sup>st</sup> interpretation, Figs. 12a, 12b and 12c) in view of Brazell et al. (1<sup>st</sup> interpretation, Fig. 12d) and Brazell et al. (2<sup>nd</sup> interpretation).

Brazell et al. (1<sup>st</sup> interpretation, Figs. 12a, 12b and 12c) disclose an object sensor including the following:

With respect to claims 35-36 and 41-42:

- a) a structural detector/device (Fig. 12b) having a surface (Fig. 12d, surface 200) that comprises a connection structure (Fig. 12d, projections 210) to receive and removably mount (Fig. 12a) a tool which is either the light generating device or the leveling device thereto (Fig. 12a), wherein the structural detector

is operable with either the light generating device or the leveling device mounted thereto (Fig. 12c);

- b) wherein the structural detector further comprises a stud finder device (Fig. 12c);
- c) a switch protruding through the surface (paragraph 68).

Brazell et al. (1<sup>st</sup> interpretation, Figs. 12a, 12b, 12c) do not disclose wherein a means to removably mount a device/tool is a connection structure on a surface of a device, a marking feature at least partially enclosed within the structural detector and wherein the surface of the structural detector has at least one orifice for receiving at least one of a marking pin and a switch.

Brazell et al. (Fig. 12d) discloses wherein a means to removably mount a device/tool is a connection structure on a surface of a device (Fig. 12d, recess 111). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to further modify the object sensor disclosed by Brazell et al. (Figs. 12a, 12b & 12c) so as to include a device having a means comprising a connection structure and a device/tool comprising a latch, as taught by Brazell et al. (Fig. 12d), so as to provide a secure means of connection with the device and the device/tool.

Brazell et al. (2<sup>nd</sup> interpretation) teach an object sensor that consists of a marking feature (Fig. 5a, aperture 35 and instrument 37) at least partially enclosed within the structural detector (Fig. 5a) and wherein the surface of the structural detector has at least one orifice for receiving at

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least one of a marking pin and a switch (Fig. 5a, aperture 35 and instrument 37). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the object sensor of Brazell et al. (1<sup>st</sup> interpretation, Figs. 12a, 12b, 12c), so as to include a marking feature, as taught by Brazell et al. (2<sup>nd</sup> interpretation), so as to provide an enhanced visual when locating an object during use of the object sensor.

9. Claim 38 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brazell et al. (1<sup>st</sup> interpretation, Figs. 12a, 12b, 12c, 12d) and Brazell et al. (2<sup>nd</sup> interpretation), as applied to claims 35-36, 39 and 41-42, as stated above, and further in view of Chen.

Brazell et al. (1<sup>st</sup> interpretation, Figs. 12a, 12b, 12c, 12d) and Brazell et al. (2<sup>nd</sup> interpretation) disclose an object sensor, as stated above in paragraph 8.

Brazell et al. (1<sup>st</sup> interpretation, Figs. 12a, 12b, 12c, 12d) and Brazell et al. (2<sup>nd</sup> interpretation) do not disclose wherein a marking feature is actuatable to extend from the surface of the structural detector and wherein the marking feature is actuatable by an actuator on the light generating device or the leveling device.

Chen teaches a stud finding device that consists of a wherein a marking feature is actuatable to extend from the surface of the structural detector (Fig. 4, marking element 6 and spring elements 4) and wherein the marking feature is actuatable by an actuator on the light generating device or the leveling device (Fig. 4, marking element 6 and spring elements 4). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the object sensor of Brazell et al. (1<sup>st</sup> interpretation, Figs.

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12a, 12b, 12c, 12d) and Brazell et al. (2<sup>nd</sup> interpretation), so as to include a spring-loaded marking pin, as taught by Chen, so as to facilitate the means of marking during use of the object sensor.

10. Claims 68, 71-75 and 78-81 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gardiner et al. (US 2004/0016058 A1) in view of Audet (US 6,266,006 B1).

Gardiner et al. disclose a multipurpose device, including the following:

- a) a stud finder (414) comprising a connection structure (25) and a surface (Fig. 3);
- b) wherein the connection structure is selected from the group consisting of a magnet, a magnetically attractive material, a hook fastener, a loop fastener, a tab, a slot, a flat surface, and a latch (25);
- c) further comprising a controller and a capacitive sensor and at least one light source connected to the controller (Fig. 8);
- d) further comprising a light generating device mounted to the connection structure (158);
- e) wherein the light generating device comprises a connection structure complementary to the connection structure of the stud finder (Fig. 3).

Gardiner et al. do not disclose the following:

- a) a normally open switch protruding through the surface.

Audet teaches a detecting device that consists of a normally-open switch protruding through the surface (Fig. 1, push button 62). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the multi-purpose device of Gardiner et al., so as to include a switch, as taught by Audet, so as to facilitate activating the device during use of the device.

With respect to claims 68, 75 and 81: a switch in which the contacts do not touch and require activation via a depression of a component is considered to be a “normally-open switch”.

With respect to claims 68 and 75: The “normally open switch” disclosed by Audet is considered to be in a broad sense, a “normally biased open switch” since Audet clearly teaches that the switch is either open or closed depending on activation of the device (Fig. 1). Furthermore, the term “biased” does not add any structural limitation to the term “switch”, thus it does not provide enough patentable weight.

With respect to claim 81: The “normally open switch” disclosed by Audet is considered to be in a broad sense, a “normally open momentary switch” since Audet clearly teaches that the switch is either open or closed depending on activation of the device (Fig. 1). Furthermore, the term “momentary” does not add any structural limitation to the term “switch”, thus it does not provide enough patentable weight.

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11. Claims 69-70 and 76-77 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gardiner et al. and Audet, as applied to claims 68, 71-75 and 78-81 as stated above, and further in view of Chen.

Gardiner et al. and Audet disclose a multipurpose device as stated above in paragraph 10

They do not disclose the following:

- a) a marker selected from the group consisting of a sharp point, a pencil, a pen, a felt-tipped pen, a marking pin and a spring-biased marking pin;
- b) wherein the marker is contained within the device.

Chen teaches a stud finding device that consists of a marker selected from the group consisting of a sharp point, a pencil, a pen, a felt-tipped pen, a marking pin, and a spring-biased marking pin (Fig. 4, marking element 6) and wherein the marker is contained within the device (Fig. 4). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the multi-purpose device of Gardiner et al., so as to include a marker, as taught by Chen, so as to facilitate the means of marking during use of the device.

***Allowable Subject Matter***

12. Claims 14-25 and 52-61 are allowed.

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13. Claims 29-31, 37, 44-49, 63 and 66-67 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Response to Arguments***

14. Applicant's arguments filed March 2, 2005 have been fully considered and are persuasive with regard to the Wu reference. Therefore, the previous final rejection has been withdrawn, the Wu reference is no longer applicable to that rejection, however, a final rejection still remains with the following references: Brazell et al., Chen, Gardiner et al. and Audet.

15. Applicant's comment regarding the lack of suggestion in Audet for a having a "housing surface adapted to be disposed adjacent to the structural surface" and a switch "protruding through the housing surface" is not persuasive because the "housing surface" is not clearly defined in the claim language, so the "housing surface" of Audet (i.e. the entire structure) is considered to be "adjacent" the structural surface. Regarding the term "adjacent", the examiner utilizes the following broadest definition: "nearby" (the American Heritage Dictionary, 1992).

### ***Conclusion***

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tania C. Courson whose telephone number is (571) 272-2239. The examiner can normally be reached on Monday-Friday from 8:00AM to 4:30PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez, can be reached on (571) 272-2245.

The fax number for this Organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



DIEGO F.F. GUTIERREZ  
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GROUP ART UNIT 2859

TCC  
March 23, 2005

**CHRISTOPHER W. FULTON**  
**PRIMARY EXAMINER**